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ABSTRACT OF THE DISCLOSURE

An OLAP-based method and system for profiling customer behavior that can be utilized to detect telecommunication fraud. First, call records are received. Next, a calling profile cube (e.g., a multi-customer profile cube) is generated based on the call records. A volume-based calling pattern cube (e.g., a calling pattern cube for each individual customer) is then generated based on the multi-customer profile cube. The volume-based calling pattern cube is then compared with known fraudulent volume-based calling patterns. If the similarities generated by the comparison reaches or exceeds a predetermined threshold, then the particular caller with the calling pattern being analyzed is considered suspicious. In this manner, suspicious calling activity can be detected, and appropriate remedial actions, such as further investigation or the cancellation of telephone services, can be taken.